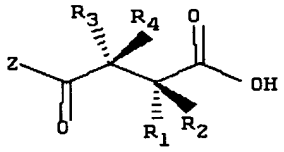
CLAIMS

What is claimed is:

1. A method for modulation of immune response by differentiation of dendritic cells, said method comprising the step of administration a pharmaceutical acceptable amount of a compound having general formula Z-OC (C $R_{n1}R_{n2}$) -CO-Z wherein Z = OH or NH_2 and n1 = n2 =1 to 8 and subject to need thereof optionally with an additive, excipient , diluents or carrier.

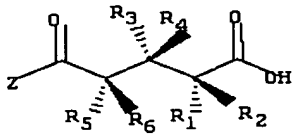
2. A method as claimed in claim 1, wherein said compound useful in vaccine formulation to prevent more efficient and faster presentation of antigens to T-cells thereby initiate primary protective Th1 immune response and help in the clearance of the pathogen.

3. A method as claimed in claim 1, wherein said compound having a structure as herein and bearing general formula ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



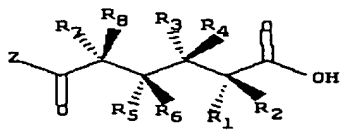
Structure 1

4. A method as claimed in claim 1, wherein said compound having a structure as herein and bearing general formula ZOC- CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



Structure 2

5. A method as claimed in claim 1, wherein said compound having structure as herein and bearing general formula ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



structure 3

6. A method as claimed in claim 1, wherein said compound in non-toxic to monocytes.

7. A method as claimed in claim 1, wherein said compound in non-toxic to macrophages.

8. A method as claimed in claim 1, wherein additives are different divalent metal cations such as Mg, Ca and Zn.

9. A method as claimed in claim 1, wherein additives are amino acid/ dicarboxylic acid derivatives and their pharmaceutically acceptable selected alkali/ alkaline earth metal salts.

10. A method as claimed in claim 3, wherein the compound is selected from the group consisting of:

I. [L- Aspartic acid, N-Sulfonic acid],
II. [2α,3-dicarboxy, propane-1-sulfonic acid],
III. [2α,3-dicarboxy, propane-1-sulfate],
IV. [1α,2-carboxy ethane sulfonic acid],
V. [1α,2-carboxy ethane sulfate],
VI. [D-aspartic acid, N-sulfonic acid],
VII. [2β,3-carboxy,propane-1-sulfonic acid],
VIII. [2β,3-carboxy,propane-1-sulfate],
IX. [1β,2-carboxy ethane-1-sulfonic acid],
X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

XXXIII. [L-glutamic acid, N-sulfonic acid],

XXXIV. [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV. [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI. [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII. [1α, 3-dicarboxy, propane sulfate],

XXXVIII. [1β, 3-dicarboxy, propane sulfate],

XXXIX. [1β, 3-dicarboxy, propane sulfonic acid],

11. A method as claimed in claim 4, wherein the compound is selected from the group consisting of:

I. [D-glutamic acid, N-sulfonic acid],

II. 2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

12. A method as claimed in claim 5, wherein the compound is selected from the group consisting of

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],

III. [D-homoglutamic acid, 3β-sulfonic acid],

IV. [D-homoglutamic acid, 3β-sulfate],

V. [D-homoglutamic acid, 4α-sulfonic acid],

VI. [D-homoglutamic acid, 4α-sulfate],

VII. [D-homoglutamic acid, 4β-sulfonic acid],

VIII. [D-homoglutamic acid, 4β-sulfate],

IX. [D-homoglutamic acid, 5α-sulfate],

X. [D-homoglutamic acid, 5α-sulfate],

XI. [D-homoglutamic acid, 5β-sulfonic acid],

XII. [D-homoglutamic acid, 5β-sulfate],

XIII. [L-homoglutamine, N-sulfonic acid],

XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII. [D-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII. [D-homoglutamine, 3α-sulfonic acid],

XXIII. [D-homoglutamine, 3α-sulfate],

XXIV. [D-homoglutamine, 3β-sulfonic acid],

XXV. [D-homoglutamine, 3β-sulfate],

XXVI. [D-homoglutamine, 4α-sulfonic acid],

XXVII. [D-homoglutamine, 4α-sulfate],

XXVIII. [D-homoglutamine, 4β-sulfonic acid],

XXIX. [D-homoglutamine, 4β-sulfate],

XXX. [D-homoglutamine, 5α-sulfonic acid],

XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

13 . A method as claimed in claim 3, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H , CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= $NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= SO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= OSO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4= SO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2= NH_2, R_4= OSO_3H is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= OSO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined.

14. A method as claimed in claim 4, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein: Z=OH or NH_2, R_1, to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2- OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4= R_5=R_6=H, R_1= SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2=OSO_3H is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4= SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4= R_5=R_6=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=SO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1= OSO_3H is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= OSO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2=CH_2SO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_6=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined.

15. A method as claimed in claim 5, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein:Z=OH or NH_2, R_1, to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

I. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1= -CH_2SO_3H is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2OSO_3H is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4= R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=SO_3H is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=OSO_3H is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=SO_3H is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=OSO_3H is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=$ H, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=$ H, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XL. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;

XLI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XLII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

XLIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

16. A method as claimed in claim 10, wherein said compound is non-toxic salts selected from the group consisting of:

I. [L- Aspartic acid, N-Sulfonic acid],

II. [2α,3-dicarboxy, propane-1-sulfonic acid],

III. [2α,3-dicarboxy, propane-1-sulfate],

IV. [1α,2-carboxy ethane sulfonic acid],

V. [1α,2-carboxy ethane sulfate],

VI. [D-aspartic acid, N-sulfonic acid],

VII. [2β,3-carboxy,propane-1-sulfonic acid],

VIII. [2β,3-carboxy;propane-1-sulfate],

IX. [1β,2-carboxy ethane-1-sulfonic acid],

X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

XXXIII. [L-glutamic acid, N-sulfonic acid],

XXXIV. [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV. [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI. [1α, 3-dicarboxy, propane sulfonic acid],

5XXXVII. [1α, 3-dicarboxy, propane sulfate],

XXXVIII. [1β, 3-dicarboxy, propane sulfate],

XXXIX. [1β, 3-dicarboxy, propane sulfonic acid],

17. A method as claimed in claim 11, wherein said compound is non-toxic salts selected from the group consisting of:

10 I. [D-glutamic acid, N-sulfonic acid],

II. [2β, 4-dicarboxy, butane-1-sulfonic acid],

III. [2β, 4-dicarboxy, butane-1-sulfate],

IV. [D-glutamic acid, 3α-sulfonic acid],

V. [D-glutamic acid, 3α-sulfate],

15 VI. [D-glutamic acid, 3β-sulfonic acid],

VII. [D-glutamic acid, 3β-sulfate],

VIII. [D-glutamic acid, 4α-sulfonic acid],

IX. [D-glutamic acid, 4α-sulfate],

X. [D-glutamic acid, 4β-sulfonic acid],

20 XI. [D-glutamic acid, 3β-sulfate],

XII. [L-glutamine, N-sulfonic acid],

XIII. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

25 XVI. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX. [D-glutamine, N-sulfonic acid],

XX. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

30 XXI. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [D-glutamine, 3α-sulfonic acid],

XXIII. [D-glutamine, 3α-sulfate],

XXIV. [D-glutamine, 3β-sulfonic acid],

XXV. [D-glutamine, 3β-sulfate],

XXVI. [D-glutamine, 4α-sulfonic acid],

XXVII. [D-glutamine, 4α-sulfate],

XXVIII. [D-glutamine, 4β-sulfonic acid],

XXIX. [D-glutamine, 4β-sulfate],

XXX. [L-homoglutamic acid, N-sulfonic acid],

XXXI. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII. [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV. [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV. [D-homoglutamic acid, N-sulfonic acid],

XXXVI. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII. [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX. [Butane-1β, 4-dicarboxy-1-sulfate],

18. A method as claimed in claim 12, wherein said compound is non-toxic salts selected from the group consisting of:

I. [D-homoglutamic acid, 3α-sulfonic acid],

II. [D-homoglutamic acid, 3α-sulfate],

III. [D-homoglutamic acid, 3β-sulfonic acid],

IV. [D-homoglutamic acid, 3β-sulfate],

V. [D-homoglutamic acid, 4α-sulfonic acid],

VI. [D-homoglutamic acid, 4α-sulfate],

VII. [D-homoglutamic acid, 4β-sulfonic acid],

VIII. [D-homoglutamic acid, 4β-sulfate],

IX. [D-homoglutamic acid, 5α-sulfate],

X. [D-homoglutamic acid, 5α-sulfate],

XI. [D-homoglutamic acid, 5β-sulfonic acid],

XII. [D-homoglutamic acid, 5β-sulfate],

XIII. [L-homoglutamine, N-sulfonic acid],

XIV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII. [D-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII. [D-homoglutamine, 3α-sulfonic acid],

XXIII. [D-homoglutamine, 3α-sulfate],

XXIV. [D-homoglutamine, 3β-sulfonic acid],

XXV. [D-homoglutamine, 3β-sulfate],

XXVI. [D-homoglutamine, 4α-sulfonic acid],

XXVII. [D-homoglutamine, 4α-sulfate],

XXVIII. [D-homoglutamine, 4β-sulfonic acid],

XXIX. [D-homoglutamine, 4β-sulfate],

XXX. [D-homoglutamine, 5α-sulfonic acid],

XXXI. [D-homoglutamine, 5α-sulfate],

XXXII. [D-homoglutamine, 5β-sulfonic acid] and

XXXIII. [D-homoglutamine, 5β-sulfate].

19. A method as claimed in claim 16, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino analogs:

I. [L- Aspartic acid, N-Sulfonic acid],

II. [2α,3-dicarboxy, propane-1-sulfonic acid],

III. [2α,3-dicarboxy, propane-1-sulfate],

IV. [1α,2-carboxy ethane sulfonic acid],

V. [1α,2-carboxy ethane sulfate],

VI. [D-aspartic acid, N-sulfonic acid],

VII. [2β,3-carboxy,propane-1-sulfonic acid],

VIII. [2β,3-carboxy,propane-1-sulfate],

IX. [1β,2-carboxy ethane-1-sulfonic acid],

X. [1β,2-carboxy ethane-1-sulfate],

XI. [D-aspartic acid, 3α -sulfonic acid],

XII. [D-aspartic acid, 3α-sulfate],

XIII. [D-aspartic acid, 3β-sulfonic acid],

XIV. [D-aspartic acid, 3β-sulfate],

XV. [L-asparagine,N-sulfonic acid],

XVI. [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII. [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII. [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX. [1α-carboxy, 2-carboxamido, ethane sulfate],

XX. [L-asparagine, 3α-sulfonic acid],

XXI. [L-asparagine, 3α-sulfate],

XXII. [L-asparagine, 3β-sulfonic acid],

XXIII. [L-asparagine, 3β-sulfate,

XXIV. [D-asparagine, N-sulfonic acid],

XXV. [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII. [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII. [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX. [D-asparagine, 3α-sulfonic acid],

XXX. [D-asparagine, 3α-sulfate],

XXXI. [D-asparagine, 3β-sulfonic acid],

XXXII. [D-asparagine, 3β-sulfate],

20. A method as claimed in claim 17, wherein said compound is selected from the group consisting of glutamic acid, glutamine and corresponding de-amino analogs:

I. [L-glutamic acid, N-sulfonic acid],

II. [2α,4-dicarboxy, butane-1-sulfonic acid],

III. [2α, 4-dicarboxy, butane-1-sulfate],

IV. [1α, 3-dicarboxy, propane sulfonic acid],

V. [1α, 3-dicarboxy, propane sulfate],

VI. [1β, 3-dicarboxy, propane sulfate],

VII. [1β, 3-dicarboxy, propane sulfonic acid],

VIII. [D-glutamic acid, N-sulfonic acid],

IX. [2β, 4-dicarboxy, butane-1-sulfonic acid],

X. [2β, 4-dicarboxy, butane-1-sulfate],

XI. [D-glutamic acid, 3α-sulfonic acid],

XII. [D-glutamic acid, 3α-sulfate],

XIII. [D-glutamic acid, 3β-sulfonic acid],

XIV. [D-glutamic acid, 3β-sulfate],

XV. [D-glutamic acid, 4α-sulfonic acid],

XVI. [D-glutamic acid, 4α-sulfate],

XVII. [D-glutamic acid, 4β-sulfonic acid],

XVIII. [D-glutamic acid, 3β-sulfate],

XIX. [L-glutamine, N-sulfonic acid],

XX. [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI. [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XXII. [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXIII. [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XXIV. [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XXV. [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI. [D-glutamine, N-sulfonic acid],

XXVII. [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXVIII. [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXIX. [D-glutamine, 3α-sulfonic acid],

XXX. [D-glutamine, 3α-sulfate],

XXXI. [D-glutamine, 3β-sulfonic acid],

XXXII. [D-glutamine, 3β-sulfate],

XXXIII. [D-glutamine, 4α-sulfonic acid],

XXXIV. [D-glutamine, 4α-sulfate],

XXXV. [D-glutamine, 4β-sulfonic acid],

XXXVI. [D-glutamine, 4β-sulfate],

XXXVII. [L-homoglutamic acid, N-sulfonic acid],

XXXVIII. [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXIX. [Pentane-2α, 5-dicarboxy-1-sulfate],

XL. [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XLI. [Butane-1α, 4-dicarboxy-1-sulfate],

21. A method as claimed in claim 18, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino analogs:

I. [D-homoglutamic acid, N-sulfonic acid],

II. [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

III. [Pentane-2β, 5-dicarboxy-1-sulfate],

IV. [Butane-1β, 4-dicarboxy-1-sulfonic acid],

V. [Butane-1β, 4-dicarboxy-1-sulfate],

VI. [D-homoglutamic acid, 3α-sulfonic acid],

VII. [D-homoglutamic acid, 3α-sulfate],

VIII. [D-homoglutamic acid, 3β-sulfonic acid],

IX. [D-homoglutamic acid, 3β-sulfate],

X. [D-homoglutamic acid, 4α-sulfonic acid],

XI. [D-homoglutamic acid, 4α-sulfate],

XII. [D-homoglutamic acid, 4β-sulfonic acid],

XIII. [D-homoglutamic acid, 4β-sulfate],

XIV. [D-homoglutamic acid, 5α-sulfate],

XV. [D-homoglutamic acid, 5α-sulfate],

XVI. [D-homoglutamic acid, 5β-sulfonic acid],

XVII. [D-homoglutamic acid, 5β-sulfate],

XVIII. [L-homoglutamine, N-sulfonic acid],

XIX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XX. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XXI. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XXII. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XXIII. [D-homoglutamine, N-sulfonic acid],

XXIV. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XXV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXVI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXVII. [D-homoglutamine, 3α-sulfonic acid],

XXVIII. [D-homoglutamine, 3α-sulfate],

XXIX. [D-homoglutamine, 3β-sulfonic acid],

XXX. [D-homoglutamine, 3β-sulfate],

XXXI. [D-homoglutamine, 4α-sulfonic acid],

XXXII. [D-homoglutamine, 4α-sulfate],

XXXIII. [D-homoglutamine, 4β-sulfonic acid],

XXXIV. [D-homoglutamine, 4β-sulfate],

XXXV. [D-homoglutamine, 5α-sulfonic acid],

XXXVI. [D-homoglutamine, 5α-sulfate],

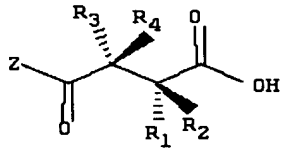
XXXVII. [D-homoglutamine, 5β-sulfonic acid] and

XXXVIII. [D-homoglutamine, 5β-sulfate].

22. Use of a composition comprising general formula Z-OC (C $R_{n1}R_{n2}$) -CO-Z wherein Z = OH or NH_2 and n1 = n2 =1 to 8 together with an additive, excipient , diluents or carrier for modulation of immune response by differentiation of dendritic cells, by administration a pharmaceutical acceptable amount to a subject need thereof.

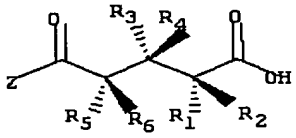
23 Use of the composition as claimed in claim 22, wherein said compound useful in vaccine formulation to prevent more efficient and faster presentation of antigens to T-cells thereby initiate primary protective Th1 immune response and help in the clearance of the pathogen.

24. Use of the composition as claimed in claim 22, wherein said compound having a structure as herein and bearing general formula ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



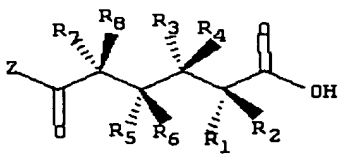
Structure 1

25. Use of the composition as claimed in claim 22,wherein said compound having a structure as herein and bearing general formula ZOC- CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



Structure 2

26. Use of the composition as claimed in claim 22, wherein said compound having structure as herein and bearing general formula ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1 to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$



structure 3

27. Use of the composition as claimed in claim 22, wherein said compound in non-toxic to monocytes.

28. Use of the composition as claimed in claim 22, wherein said compound in non-toxic to macrophages.

29. Use of the composition as claimed in claim 22,wherein additives are different divalent metal cations such as Mg, Ca and Zn.

30. Use of the composition as claimed in claim 22, wherein additives are amino acid/ dicarboxylic acid derivatives and their pharmaceutically acceptable selected alkali/ alkaline earth metal salts.

31. Use of the composition as claimed in claim 22, wherein the compound is selected from the group consisting of:

I [L- Aspartic acid, N-Sulfonic acid],

II [2α,3-dicarboxy, propane-1-sulfonic acid],

III [2α,3-dicarboxy, propane-1-sulfate],

IV [1α,2-carboxy ethane sulfonic acid],

V [1α,2-carboxy ethane sulfate],

VI [D-aspartic acid, N-sulfonic acid],

VII [2β,3-carboxy,propane-1-sulfonic acid],

VIII [2β,3-carboxy,propane-1-sulfate],

IX [1β,2-carboxy ethane-1-sulfonic acid],

X [1β,2-carboxy ethane-1-sulfate],

XI [D-aspartic acid, 3α -sulfonic acid],

XII [D-aspartic acid, 3α-sulfate],

XIII [D-aspartic acid, 3β-sulfonic acid],

XIV [D-aspartic acid, 3β-sulfate],

XV [L-asparagine,N-sulfonic acid],

XVI [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX [1α-carboxy, 2-carboxamido, ethane sulfate],

XX [L-asparagine, 3α-sulfonic acid],

XXI [L-asparagine, 3α-sulfate],

XXII [L-asparagine, 3β-sulfonic acid],

XXIII [L-asparagine, 3β-sulfate,

XXIV [D-asparagine, N-sulfonic acid],

XXV [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX [D-asparagine, 3α-sulfonic acid],

XXX [D-asparagine, 3α-sulfate],

XXXI [D-asparagine, 3β-sulfonic acid],

XXXII [D-asparagine, 3β-sulfate],

XXXIII [L-glutamic acid, N-sulfonic acid],

XXXIV [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII [1α, 3-dicarboxy, propane sulfate],

XXXVIII [1β, 3-dicarboxy, propane sulfate],

XXXIX [1β, 3-dicarboxy, propane sulfonic acid],

32. Use of the composition as claimed in claim 22, wherein the compound is selected from the group consisting of:

I [D-glutamic acid, N-sulfonic acid],

II 2β, 4-dicarboxy, butane-1-sulfonic acid],

III [2β, 4-dicarboxy, butane-1-sulfate],

IV [D-glutamic acid, 3α-sulfonic acid],

V [D-glutamic acid, 3α-sulfate],

VI [D-glutamic acid, 3β-sulfonic acid],

VII [D-glutamic acid, 3β-sulfate],

VIII [D-glutamic acid, 4α-sulfonic acid],

IX [D-glutamic acid, 4α-sulfate],

X [D-glutamic acid, 4β-sulfonic acid],

XI [D-glutamic acid, 3β-sulfate],

XII [L-glutamine, N-sulfonic acid],

XIII [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX [D-glutamine, N-sulfonic acid],

XX [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII [D-glutamine, 3α-sulfonic acid],

XXIII [D-glutamine, 3α-sulfate],

XXIV [D-glutamine, 3β-sulfonic acid],

XXV [D-glutamine, 3β-sulfate],

XXVI [D-glutamine, 4α-sulfonic acid],

XXVII [D-glutamine, 4α-sulfate],

XXVIII [D-glutamine, 4β-sulfonic acid],

XXIX [D-glutamine, 4β-sulfate],

XXX [L-homoglutamic acid, N-sulfonic acid],

XXXI [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV [D-homoglutamic acid, N-sulfonic acid],

XXXVI [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX [Butane-1β, 4-dicarboxy-1-sulfate],

33. Use of the composition as claimed in claim 22, wherein the compound is selected from the group consisting of

XXXIV. [D-homoglutamic acid, 3α-sulfonic acid],

XXXV. [D-homoglutamic acid, 3α-sulfate],

XXXVI. [D-homoglutamic acid, 3β-sulfonic acid],

XXXVII. [D-homoglutamic acid, 3β-sulfate],

XXXVIII. [D-homoglutamic acid, 4α-sulfonic acid],

XXXIX. [D-homoglutamic acid, 4α-sulfate],

XL. [D-homoglutamic acid, 4β-sulfonic acid],

XLI. [D-homoglutamic acid, 4β-sulfate],

XLII. [D-homoglutamic acid, 5α-sulfate],

XLIII. [D-homoglutamic acid, 5α-sulfate],

XLIV. [D-homoglutamic acid, 5β-sulfonic acid],

XLV. [D-homoglutamic acid, 5β-sulfate],

XLVI. [L-homoglutamine, N-sulfonic acid],

XLVII. [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XLVIII. [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XLIX. [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

L. [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

LI. [D-homoglutamine, N-sulfonic acid],

LII. [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

LIII. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

LIV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

LV. [D-homoglutamine, 3α-sulfonic acid],

LVI. [D-homoglutamine, 3α-sulfate],

LVII. [D-homoglutamine, 3β-sulfonic acid],

LVIII. [D-homoglutamine, 3β-sulfate],

LIX. [D-homoglutamine, 4α-sulfonic acid],

LX. [D-homoglutamine, 4α-sulfate],

LXI. [D-homoglutamine, 4β-sulfonic acid],

LXII. [D-homoglutamine, 4β-sulfate],

LXIII. [D-homoglutamine, 5α-sulfonic acid],

LXIV. [D-homoglutamine, 5α-sulfate],

LXV. [D-homoglutamine, 5β-sulfonic acid] and

LXVI. [D-homoglutamine, 5β-sulfate].

34. Use of the composition as claimed in claim 22, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_3R_4-CR_1R_2-COOH wherein: Z=OH or NH_2, R_1, to R_4 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

XXXIII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=H, R_1= $NHSO_3H$ is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2SO_3H is the same meaning as is before defined;

XXXV. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

XL. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XLI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

XLII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

XLIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XLIV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

XLV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

XLVI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

XLVII. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XLVIII. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=CH_2SO_3H is the same meaning as is before defined;

XLIX. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=H, R_1= CH_2OSO_3H is the same meaning as is before defined;

L. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=SO_3H is the same meaning as is before defined;

LI. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=H, R_1=OSO_3H is the same meaning as is before defined;

LII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= SO_3H is the same meaning as is before defined;

LIII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= OSO_3H is the same meaning as is before defined;

LIV. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4= SO_3H is the same meaning as is before defined;

LV. A compound as claimed in claim 1, wherein Z=NH_2, R_1=R_3=H, R_2= NH_2, R_4= OSO_3H is the same meaning as is before defined;

LVI. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

LVII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2SO_3H is the same meaning as is before defined;

LVIII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

LIX. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=H, R_2=SO_3H is the same meaning as is before defined;

LX. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=H, R_2=OSO_3H is the same meaning as is before defined;

LXI. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= SO_3H is the same meaning as is before defined;

LXII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=H, R_2=NH_2, R_3= OSO_3H is the same meaning as is before defined;

LXIII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

LXIV. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined.

35. Use of the composition as claimed in claim 22, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein: Z=OH or NH_2, R_1, to R_6 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2- OSO_3H, $NHSO_3H$

XXXVII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1= CH_2SO_3H is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XL. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4= R_5=R_6=H, R_1= SO_3H is the same meaning as is before defined;

XLI. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6=H, R_1=OSO_3H is the same meaning as is before defined;

XLII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2=OSO_3H is the same meaning as is before defined;

XLIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= SO_3H is the same meaning as is before defined;

XLIV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=H, R_2= $NHSO_3H$ is the same meaning as is before defined;

XLV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2SO_3H is the same meaning as is before defined;

XLVI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=H, R_2= CH_2OSO_3H is the same meaning as is before defined;

XLVII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=SO_3H is the same meaning as is before defined;

XLVIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_5=R_6=H, R_2= NH_2, R_3=OSO_3H is the same meaning as is before defined;

XLIX. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4= SO_3H is the same meaning as is before defined;

L. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_6=H, R_2= NH_2, R_4=OSO_3H is the same meaning as is before defined;

LI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4= R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

LII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

LIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

LIV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined;

LV. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

LVI. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4= R_5=R_6=H, R_1=CH_2SO_3H is the same meaning as is before defined;

LVII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1= CH_2OSO_3H$ is the same meaning as is before defined;

LVIII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=SO_3H$ is the same meaning as is before defined;

LIX. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1= OSO_3H$ is the same meaning as is before defined;

LX. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= OSO_3H$ is the same meaning as is before defined;

LXI. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= SO_3H$ is the same meaning as is before defined;

LXII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= NHSO_3H$ is the same meaning as is before defined;

LXIII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

LXIV. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2= CH_2OSO_3H$ is the same meaning as is before defined;

LXV. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2= NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

LXVI. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2= NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

LXVII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=H$, $R_2= NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

LXVIII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=H$, $R_2= NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

LXIX. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=SO_3H is the same meaning as is before defined;

LXX. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=R_3=R_6=H, R_2= NH_2, R_5=OSO_3H is the same meaning as is before defined;

LXXI. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=SO_3H is the same meaning as is before defined;

LXXII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_5=R_4=H, R_2= NH_2, R_6=OSO_3H is the same meaning as is before defined.

36. Use of the composition as claimed in claim 22, wherein novel sulfonic acid / sulfate derivatives of the formulae ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH, wherein:Z=OH or NH_2, R_1, to R_8 denotes H, NH_2, SO_3H, or OSO_3H, CH_2-SO_3H, CH_2-OSO_3H, $NHSO_3H$

XLIV. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

XLV. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1= -CH_2SO_3H is the same meaning as is before defined;

XLVI. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

XLVII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4= R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

XLVIII. A compound as claimed in claim 22, wherein Z=OH, R_2=R_3=R_4=R_5=R_6= R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

XLIX. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6= R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

L. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6= R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

LI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6= R_7=R_8=H, R_2=CH_2OSO_3H is the same meaning as is before defined;

LII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4= R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

LIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

LIV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4= R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

LV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

LVI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2= NH_2, R_4=SO_3H is the same meaning as is before defined;

LVII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_4=OSO_3H is the same meaning as is before defined;

LVIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4= R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=SO_3H is the same meaning as is before defined;

LIX. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_3=R_6=R_7=R_8=H, R_2=NH_2, R_5=OSO_3H is the same meaning as is before defined;

LX. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=SO_3H is the same meaning as is before defined;

LXI. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_8=H, R_2=NH_2, R_6=OSO_3H is the same meaning as is before defined;

LXII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=SO_3H is the same meaning as is before defined;

LXIII. A compound as claimed in claim 22, wherein Z=OH, R_1=R_4=R_3=R_6=R_5=R_8=H, R_2=NH_2, R_7=OSO_3H is the same meaning as is before defined;

LXIV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=SO_3H is the same meaning as is before defined;

LXV. A compound as claimed in claim 22, wherein Z=OH, R_1=R_3=R_5=R_4=R_7=R_6=H, R_2=NH_2, R_8=OSO_3H is the same meaning as is before defined;

LXVI. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=$NHSO_3H$ is the same meaning as is before defined;

LXVII. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2SO_3H is the same meaning as is before defined;

LXVIII. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=CH_2OSO_3H is the same meaning as is before defined;

LXIX. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=SO_3H is the same meaning as is before defined;

LXX. A compound as claimed in claim 22, wherein Z=NH_2, R_2=R_3=R_4=R_5=R_6=R_7=R_8=H, R_1=OSO_3H is the same meaning as is before defined;

LXXI. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=$NHSO_3H$ is the same meaning as is before defined;

LXXII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=CH_2SO_3H is the same meaning as is before defined;

LXXIII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=SO_3H is the same meaning as is before defined;

LXXIV. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_4=R_5=R_6=R_7=R_8=H, R_2=OSO_3H is the same meaning as is before defined;

LXXV. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=SO_3H is the same meaning as is before defined;

LXXVI. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_4=R_5=R_6=R_7=R_8=H, R_2=NH_2, R_3=OSO_3H is the same meaning as is before defined;

LXXVII. A compound as claimed in claim 22, wherein Z=NH_2, R_1=R_3=R_5=R_6=R_7=R_8= H, R_2=NH_2, R_4=SO_3H is the same meaning as is before defined;

LXXVIII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=$ H, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

LXXIX. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

LXXX. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

LXXXI. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

LXXXII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

LXXXIII. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;

LXXXIV. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

LXXXV. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

LXXXVI. A compound as claimed in claim 22, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

37. Use of the composition as claimed in claim 22, wherein said compound is non-toxic salts selected from the group consisting of:

I [L- Aspartic acid, N-Sulfonic acid],

II [2α,3-dicarboxy, propane-1-sulfonic acid],

III [2α,3-dicarboxy, propane-1-sulfate],

IV [1α,2-carboxy ethane sulfonic acid],

V [1α,2-carboxy ethane sulfate],

VI [D-aspartic acid, N-sulfonic acid],

VII [2β,3-carboxy,propane-1-sulfonic acid],

VIII [2β,3-carboxy,propane-1-sulfate],

IX [1β,2-carboxy ethane-1-sulfonic acid],

X [1β,2-carboxy ethane-1-sulfate],

XI [D-aspartic acid, 3α -sulfonic acid],

XII [D-aspartic acid, 3α-sulfate],

XIII [D-aspartic acid, 3β-sulfonic acid],

XIV [D-aspartic acid, 3β-sulfate],

XV [L-asparagine, N-sulfonic acid],

XVI [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX [1α-carboxy, 2-carboxamido, ethane sulfate],

XX [L-asparagine, 3α-sulfonic acid],

XXI [L-asparagine, 3α-sulfate],

XXII [L-asparagine, 3β-sulfonic acid],

XXIII [L-asparagine, 3β-sulfate,

XXIV [D-asparagine, N-sulfonic acid],

XXV [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX [D-asparagine, 3α-sulfonic acid],

XXX [D-asparagine, 3α-sulfate],

XXXI [D-asparagine, 3β-sulfonic acid],

XXXII [D-asparagine, 3β-sulfate],

XXXIII [L-glutamic acid, N-sulfonic acid],

XXXIV [2α,4-dicarboxy, butane-1-sulfonic acid],

XXXV [2α, 4-dicarboxy, butane-1-sulfate],

XXXVI [1α, 3-dicarboxy, propane sulfonic acid],

XXXVII [1α, 3-dicarboxy, propane sulfate],

XXXVIII [1β, 3-dicarboxy, propane sulfate],

XXXIX [1β, 3-dicarboxy, propane sulfonic acid],

38. Use of the composition as claimed in claim 22, wherein said compound is non-toxic salts selected from the group consisting of:

I [D-glutamic acid, N-sulfonic acid],

II [2β, 4-dicarboxy, butane-1-sulfonic acid],

III [2β, 4-dicarboxy, butane-1-sulfate],

IV [D-glutamic acid, 3α-sulfonic acid],

V [D-glutamic acid, 3α-sulfate],

VI [D-glutamic acid, 3β-sulfonic acid],

VII [D-glutamic acid, 3β-sulfate],

VIII [D-glutamic acid, 4α-sulfonic acid],

IX [D-glutamic acid, 4α-sulfate],

X [D-glutamic acid, 4β-sulfonic acid],

XI [D-glutamic acid, 3β-sulfate],

XII [L-glutamine, N-sulfonic acid],

XIII [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XIV [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XV [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVI [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XVII [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XIX [D-glutamine, N-sulfonic acid],

XX [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXII [D-glutamine, 3α-sulfonic acid],

XXIII [D-glutamine, 3α-sulfate],

XXIV [D-glutamine, 3β-sulfonic acid],

XXV [D-glutamine, 3β-sulfate],

XXVI [D-glutamine, 4α-sulfonic acid],

XXVII [D-glutamine, 4α-sulfate],

XXVIII [D-glutamine, 4β-sulfonic acid],

XXIX [D-glutamine, 4β-sulfate],

XXX [L-homoglutamic acid, N-sulfonic acid],

XXXI [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXII [Pentane-2α, 5-dicarboxy-1-sulfate],

XXXIII [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XXXIV [Butane-1α, 4-dicarboxy-1-sulfate],

XXXV [D-homoglutamic acid, N-sulfonic acid],

XXXVI [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

XXXVII [Pentane-2β, 5-dicarboxy-1-sulfate],

XXXVIII [Butane-1β, 4-dicarboxy-1-sulfonic acid],

XXXIX [Butane-1β, 4-dicarboxy-1-sulfate],

39. Use of the composition as claimed in claim 22, wherein said compound is non-toxic salts selected from the group consisting of:

I [D-homoglutamic acid, 3α-sulfonic acid],

II [D-homoglutamic acid, 3α-sulfate],

III [D-homoglutamic acid, 3β-sulfonic acid],

IV [D-homoglutamic acid, 3β-sulfate],

V [D-homoglutamic acid, 4α-sulfonic acid],

VI [D-homoglutamic acid, 4α-sulfate],

VII [D-homoglutamic acid, 4β-sulfonic acid],

VIII [D-homoglutamic acid, 4β-sulfate],

IX [D-homoglutamic acid, 5α-sulfate],

X [D-homoglutamic acid, 5α-sulfate],

XI [D-homoglutamic acid, 5β-sulfonic acid],

XII [D-homoglutamic acid, 5β-sulfate],

XIII [L-homoglutamine, N-sulfonic acid],

XIV [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XV [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XVI [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XVII [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XVIII [D-homoglutamine, N-sulfonic acid],

XIX [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XX [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXI [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXII [D-homoglutamine, 3α-sulfonic acid],

XXIII [D-homoglutamine, 3α-sulfate],

XXIV [D-homoglutamine, 3β-sulfonic acid],

XXV [D-homoglutamine, 3β-sulfate],

XXVI [D-homoglutamine, 4α-sulfonic acid],

XXVII [D-homoglutamine, 4α-sulfate],

XXVIII [D-homoglutamine, 4β-sulfonic acid],

XXIX [D-homoglutamine, 4β-sulfate],

XXX [D-homoglutamine, 5α-sulfonic acid],

XXXI [D-homoglutamine, 5α-sulfate],

XXXII [D-homoglutamine, 5β-sulfonic acid] and

XXXIII [D-homoglutamine, 5β-sulfate].

40. Use of the composition as claimed in claim 22, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino analogs:

I [L- Aspartic acid, N-Sulfonic acid],

II [2α,3-dicarboxy, propane-1-sulfonic acid],

III [2α,3-dicarboxy, propane-1-sulfate],

IV [1α,2-carboxy ethane sulfonic acid],

V [1α,2-carboxy ethane sulfate],

VI [D-aspartic acid, N-sulfonic acid],

VII [2β,3-carboxy,propane-1-sulfonic acid],

VIII [2β,3-carboxy,propane-1-sulfate],

IX [1β,2-carboxy ethane-1-sulfonic acid],

X [1β,2-carboxy ethane-1-sulfate],

XI [D-aspartic acid, 3α -sulfonic acid],

XII [D-aspartic acid, 3α-sulfate],

XIII [D-aspartic acid, 3β-sulfonic acid],

XIV [D-aspartic acid, 3β-sulfate],

XV [L-asparagine,N-sulfonic acid],

XVI [2α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XVII [2α-carboxy, 3-carboxamido, propane-1-sulfate],

XVIII [1α-carboxy, 2-carboxamido, ethane sulfonic acid],

XIX [1α-carboxy, 2-carboxamido, ethane sulfate],

XX [L-asparagine, 3α-sulfonic acid],

XXI [L-asparagine, 3α-sulfate],

XXII [L-asparagine, 3β-sulfonic acid],

XXIII [L-asparagine, 3β-sulfate,

XXIV [D-asparagine, N-sulfonic acid],

XXV [2β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI [2β-carboxy, 3-carboxamido, propane-1-sulfate],

XXVII [1β-carboxy, 2-carboxamido, ethane sulfonic acid],

XXVIII [1β-carboxy, 2-carboxamido, ethane sulfate],

XXIX [D-asparagine, 3α-sulfonic acid],

XXX [D-asparagine, 3α-sulfate],

XXXI [D-asparagine, 3β-sulfonic acid],

XXXII [D-asparagine, 3β-sulfate],

41. Use of the composition as claimed in claim 22, wherein said compound is selected from the group consisting of glutamic acid, glutamine and corresponding de-amino analogs:

I [L-glutamic acid, N-sulfonic acid],

II [2α,4-dicarboxy, butane-1-sulfonic acid],

III [2α, 4-dicarboxy, butane-1-sulfate],

IV [1α, 3-dicarboxy, propane sulfonic acid],

V [1α, 3-dicarboxy, propane sulfate],

VI [1β, 3-dicarboxy, propane sulfate],

VII [1β, 3-dicarboxy, propane sulfonic acid],

VIII [D-glutamic acid, N-sulfonic acid],

IX [2β, 4-dicarboxy, butane-1-sulfonic acid],

X [2β, 4-dicarboxy, butane-1-sulfate],

XI [D-glutamic acid, 3α-sulfonic acid],

XII [D-glutamic acid, 3α-sulfate],

XIII [D-glutamic acid, 3β-sulfonic acid],

XIV [D-glutamic acid, 3β-sulfate],

XV [D-glutamic acid, 4α-sulfonic acid],

XVI [D-glutamic acid, 4α-sulfate],

XVII [D-glutamic acid, 4β-sulfonic acid],

XVIII [D-glutamic acid, 3β-sulfate],

XIX [L-glutamine, N-sulfonic acid],

XX [2α-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXI [2α-carboxy, 4-carboxamido, butane-1-sulfate],

XXII [1α-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXIII [1α-carboxy, 3-carboxamido, propane-1-sulfate],

XXIV [1β-carboxy, 3-carboxamido, propane-1-sulfate],

XXV [1β-carboxy, 3-carboxamido, propane-1-sulfonic acid],

XXVI [D-glutamine, N-sulfonic acid],

XXVII [2β-carboxy, 4-carboxamido, butane-1-sulfonic acid],

XXVIII [2β-carboxy, 4-carboxamido, butane-1-sulfate],

XXIX [D-glutamine, 3α-sulfonic acid],

XXX [D-glutamine, 3α-sulfate],

XXXI [D-glutamine, 3β-sulfonic acid],

XXXII [D-glutamine, 3β-sulfate],

XXXIII [D-glutamine, 4α-sulfonic acid],

XXXIV [D-glutamine, 4α-sulfate],

XXXV [D-glutamine, 4β-sulfonic acid],

XXXVI [D-glutamine, 4β-sulfate],

XXXVII [L-homoglutamic acid, N-sulfonic acid],

XXXVIII [Pentane-2α, 5-dicarboxy-1-sulfonic acid],

XXXIX [Pentane-2α, 5-dicarboxy-1-sulfate],

XL [Butane-1α, 4-dicarboxy-1-sulfonic acid],

XLI [Butane-1α, 4-dicarboxy-1-sulfate],

42. Use of the composition as claimed in claim 22, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino analogs:

I [D-homoglutamic acid, N-sulfonic acid],

II [Pentane-2β, 5-dicarboxy-1-sulfonic acid],

III [Pentane-2β, 5-dicarboxy-1-sulfate],

IV [Butane-1β, 4-dicarboxy-1-sulfonic acid],

V [Butane-1β, 4-dicarboxy-1-sulfate],

VI [D-homoglutamic acid, 3α-sulfonic acid],

VII [D-homoglutamic acid, 3α-sulfate],

VIII [D-homoglutamic acid, 3β-sulfonic acid],

IX [D-homoglutamic acid, 3β-sulfate],

X [D-homoglutamic acid, 4α-sulfonic acid],

XI [D-homoglutamic acid, 4α-sulfate],

XII [D-homoglutamic acid, 4β-sulfonic acid],

XIII [D-homoglutamic acid, 4β-sulfate],

XIV [D-homoglutamic acid, 5α-sulfate],

XV [D-homoglutamic acid, 5α-sulfate],

XVI [D-homoglutamic acid, 5β-sulfonic acid],

XVII [D-homoglutamic acid, 5β-sulfate],

XVIII [L-homoglutamine, N-sulfonic acid],

XIX [Pentane-2α-carboxy, 5-carboxamido-1-sulfonic acid],

XX [Pentane-2α-carboxy, 5-carboxamido-1-sulfate],

XXI [Butane-1α-carboxy, 4-carboxamido-1-sulfonic acid],

XXII [Butane-1α-carboxy, 4-carboxamido-1-sulfate],

XXIII [D-homoglutamine, N-sulfonic acid],

XXIV [Pentane-2β-carboxy, 5-carboxamido-1-sulfonic acid],

XXV [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],

XXVI [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],

XXVII [D-homoglutamine, 3α-sulfonic acid],

XXVIII [D-homoglutamine, 3α-sulfate],

XXIX [D-homoglutamine, 3β-sulfonic acid],

XXX [D-homoglutamine, 3β-sulfate],

XXXI [D-homoglutamine, 4α-sulfonic acid],

XXXII [D-homoglutamine, 4α-sulfate],

XXXIII [D-homoglutamine, 4β-sulfonic acid],

XXXIV [D-homoglutamine, 4β-sulfate],

XXXV [D-homoglutamine, 5α-sulfonic acid],

XXXVI [D-homoglutamine, 5α-sulfate],

XXXVII [D-homoglutamine, 5β-sulfonic acid] and

XXXVIII [D-homoglutamine, 5β-sulfate].